

U.S. Customs and Border Protection Report to Congress on the Automated Commercial Environment (ACE) Third Quarter Fiscal Year 2007

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Table of Contents

		slative Requirement	
		utive Summary	
3.	Васк	ground	. 5
		oliance with the Customs Modernization Act	
5.		ram Performance – Secure Cargo Management Capabilities	
	5.1	Selected Accomplishments	
	5.2	Program Assessment	
_	5.3	Near-Term Milestones	_
6.	_	ram Performance – Screening and Targeting Capabilities	
	6.1	Selected Accomplishments	
	6.2	Program Assessment	
	6.3	Near-Term Milestones	
7.	•	GAO Recommendations	
	7.1	Cost Estimating	14
	7.2	Human Capital Management	15
	7.3	ACE Support for Other Homeland Security Applications	16
	7.4	Measurement Program Management Improvement Efforts	
	7.5	Accountability Framework	
	7.6	ACE Program Quarterly Reporting	
	7.7	Satisfaction of Legislative Conditions	20
	7.8	Risk of Severe Defects	21
	7.9	Concurrent Development	22
	7.10	Earned Value Management	23
	7.11	Performance Measures	23
8.	Progi	ram Baseline	24
	8.1	Overall Schedule and Cost	
		8.1.1 Detailed Development and Deployment Schedule	24
	8.2	Fiscal Status	24
9.	Conc	lusion	25
Ap	pendi	x A. Secure Cargo Management Implementation and Capabilities	27
Αp	pendi	x B. Screening and Targeting Implementation and Capabilities	31
		x C. Open GAO Recommendations	
		x D. ACE Critical Few Performance Measures	
		x E. Schedule Outlook	
		x F. Acronyms and Selected Definitions	
		. Prime Contractor Rolling 12 Month Staff Turnover Rate	
		. ACE and International Trade Data System Funding Status	

1. Legislative Requirement

The Automated Commercial Environment (ACE) Report to Congress is provided quarterly in accordance with the requirement set forth in section 311(b)(3) of the Customs Border Security Act of 2002 (Trade Act of 2002), which requires that:

Not later than 90 days after the date of the enactment of this Act, and not later than the end of each subsequent 90-day period, the Commissioner of Customs shall prepare and submit to the Committee on Ways and Means of the House of Representatives and the Committee on Finance of the Senate a report demonstrating that the development and establishment of the Automated Commercial Environment computer system is being carried out in a cost-effective manner and meets the modernization requirements of Title VI of the North American Free Trade Agreement Implementation Act.

Customs Border Security Act of 2002, P.L. 107-210, § 311, 116 Stat. 933, 973 (2002).

In addition, contents of this report address requirements set forth in House Report 109-476, which states:

The Committee directs CBP to improve oversight by assuring releases are ready to proceed beyond critical design and production readiness reviews before deployment. Also, CBP shall ensure ACE aligns its goals, benefits, desired business outcomes, and performance metrics.

House Report. 109-476, at 32 (2006).

This report also complies with Government Accountability Office (GAO) Report 04-719, Customs Modernization, May 2004, which requires U.S. Customs and Border Protection (CBP) to report on the status of open GAO recommendations.

2. Executive Summary

The Report to Congress provides an update on Automated Commercial Environment (ACE) accomplishments, challenges, fiscal status, and upcoming program milestones. Most significantly, the report demonstrates how ACE is helping U.S. Customs and Border Protection (CBP) achieve Department of Homeland Security (DHS) strategic objectives, and how ACE is providing CBP personnel in the field with enhanced capabilities to better accomplish the CBP mission of preventing terrorism and facilitating legitimate trade and travel.

Congress has stated that all federal agencies with responsibilities related to the importation or exportation of cargo must participate in the International Trade Data System (ITDS). Accordingly, this report includes the status of ITDS efforts, as well as efforts to fulfill program commitments, address Government Accountability Office (GAO) open audit recommendations, and comply with Congressional direction that focuses on both aligning ACE goals and performance metrics, as well as ensuring that ACE releases are ready to proceed beyond key readiness milestones.

This Report to Congress is provided to the Senate Committee on Finance and the House of Representatives Committee on Ways and Means, as well as both the House and Senate Committees on Appropriations. The reporting period for this update is April 1 to June 30, 2007. A review of previous reports may be helpful in understanding the full context of the information provided in this edition of the report. Appendices A and B outline ACE implementation and capabilities.

Notable in this Report

On April 19, 2007, CBP began requiring truck carriers to file electronic truck manifests (e-Manifests) at all ports of entry in Texas, New Mexico, and California. E-Manifests are now required at all southern land border ports. CBP further expanded the mandatory e-Manifest policy to all land border ports of entry in Michigan and New York on May 24, 2007. The agency also announced via two Federal Register notices that truck carriers will be required to file e-Manifests at all land border ports in Vermont, New Hampshire, and western North Dakota (including St. John, Fortuna, Ambrose, Carbury, Noonan, Dunseith, Sherwood, Antler, Northgate, Westhope, and Portal) effective July 12, 2007, as well as all land border ports in Idaho and Montana, effective August 6, 2007.

The Bureau of Industry and Security of the Department of Commerce, the Foreign Agriculture Service of the Department of Agriculture, and the Office of Logistics Management of the Department of State became ITDS Participating Government Agencies (PGAs), bringing to 32 the number of PGAs in ACE/ITDS.

CBP successfully received DHS Production Readiness Review (PRR) certification for the Targeting Framework (TF) by the DHS Chief Information Officer (CIO) on May 29, 2007.

3. Background

In 2001, the U.S. Customs Service (now part of U.S. Customs and Border Protection (CBP)) embarked on the Automated Commercial Environment (ACE) as its first project in a multiyear modernization effort to reengineer agency business processes and the information technology that supports them. The initial plan was to focus first on ACE and trade processing and then on other elements of CBP Modernization, including enforcement. The terrorist attacks on September 11, 2001, changed this focus. ACE is being developed to support the CBP mission of protecting the American public against terrorists and the instruments of terror and enforcing the laws of the United States while fostering our Nation's economic security through the facilitation of lawful international trade and travel.

With the establishment of the Department of Homeland Security (DHS), CBP has also aligned ACE with the DHS mission and strategic goals. ACE will help reduce our Nation's vulnerability to threats without diminishing economic security by providing threat awareness, prevention, and protection for the homeland. Specifically, ACE will provide CBP personnel with even more automated tools and information to decide – before a shipment reaches U.S. borders – what cargo should be targeted because it poses a potential risk, and what cargo should be expedited because it complies with U.S. laws.

Working closely with other government agencies and the trade community, CBP is modernizing to: (1) enhance interagency information sharing and analysis; (2) replace and/or supplement existing systems taxed by increasing demands; and (3) comply with legislation requiring greater agency efficiency and effectiveness to better serve the public.

4. Compliance with the Customs Modernization Act

The 1993 Customs Modernization Act (Mod Act) was passed with legislation implementing the North American Free Trade Agreement. The Mod Act is the legal foundation for the CBP Modernization effort and promotes the concept of "shared responsibility." To help accomplish these objectives, the Mod Act outlined requirements for automation and emphasized electronic trade processing. The delivery of ACE capabilities will fulfill the Mod Act by enabling trade community users and CBP officers to electronically submit and retrieve import transaction data through an intuitive, standards-based, secure Web portal. ACE is providing new capabilities to Government users and the trade community by streamlining CBP business processes, reducing requirements for paper documentation, and strengthening Screening and Targeting (S&T) systems. ACE is also providing the technology backbone for the International Trade Data System (ITDS), which will provide a "single-window" for submitting trade information to federal agencies that share responsibility for facilitating international trade and securing America's supply chain. These are key requirements for enhancing border security and expediting legitimate trade.

5. Program Performance – Secure Cargo Management Capabilities

This section discusses the status of ACE Secure Cargo Management capabilities, including recent accomplishments, an overall assessment of these capabilities, and projected near-term milestones.

5.1 Selected Accomplishments

The following are selected program accomplishments between April 1, 2007, and June 30, 2007:

- Expanded deployment of ACE truck processing capabilities on the Northern Border. CBP deployed ACE truck processing capabilities to remaining ports in Maine and all land border ports in Minnesota. ACE truck processing capabilities are now operational at 94 of 99 land border ports.
- Completed the Product Definition Completion Review (PDCR) for e-Manifest:
 Air Manifest and Cargo Release (M2) Air and Conveyance Management System
 and Full Multi-Modal Manifest capabilities. On May 22, 2007, and June 25, 2007,
 CBP completed the PDCR for Air and Conveyance Management System and Full
 Multi-Modal Manifest capabilities, respectively. Completion of these PDCRs
 signaled that requirements have been defined and design work can begin.
- Completed preliminary performance tests using Rail and Sea Manifest (M1) production data. In May 2007, CBP completed a series of performance tests using production rail and sea manifest data as part of advance preparations for the May 2008 Test Readiness Review (TRR).
- Converted all ACE Secure Data Portal reports to a new ACE reporting tool. On May 5, 2007, CBP completed the implementation of a new reporting tool that gives trade community users more options for analyzing and managing account data.
- Completed the TRR for Entry Summary, Accounts, and Revenue (ESAR):
 Master Data and Enhanced Accounts (A1). On June 4, 2007, CBP completed the
 TRR for ESAR: Master Data and Enhanced Accounts (A1), indicating that A1
 software development is complete and ready for acceptance testing.
- Expanded the number of ITDS Participating Government Agencies (PGAs). In April 2007, the Bureau of Industry and Security of the Department of Commerce, the Foreign Agriculture Service of the Department of Agriculture, and the Office of Logistics Management of the Department of State became ITDS PGAs, bringing to 32 the number of PGAs in ACE/ITDS.
- Transmitted e-Manifest data through the ACE and Federal Motor Carrier Safety Administration (FMCSA) interface. CBP and FMCSA successfully exchanged production e-Manifest data via the interface between ACE and the Query Central

system and concluded performance testing on the interface on June 30, 2007. CBP and FMCSA continue to collaborate on the implementation of an ACE/Query Central interface that will facilitate the transmission of CBP e-Manifest data used by FMCSA to conduct pre-arrival screening.

- Held ACE Exchange outreach conferences for the trade community. CBP hosted approximately 950 brokers, importers, carriers, and software developers at the fourth and fifth ACE Exchange Conferences, held in Laredo, Texas, May 21-23, 2007, and Buffalo, New York, June 4-6, 2007. Both events included a wide-ranging discussion of current and future ACE capabilities and nearly 300 one-on-one ACE Secure Data Portal training sessions.
- Held Trade Support Network (TSN) Plenary Session. On June 20-22, 2007, CBP held a TSN plenary session to provide TSN members an opportunity to discuss ACE-related issues, receive updates, provide feedback on ACE capabilities, and receive a status report on ACE implementation dates.

5.2 Program Assessment

CBP continues to expand the implementation of the requirement to file e-Manifests. With the April 19, 2007, implementation of the mandatory e-Manifest policy at all land border ports in California, Texas, and New Mexico, all truck carriers crossing the Southern Border into the United States are now required to file e-Manifests one hour before arrival or half an hour prior to arrival if they are participants in the Free and Secure Trade (FAST) program. On May 24, 2007, the agency further expanded the policy by requiring e-Manifests at all land border ports in Michigan and New York. Nationally, across all ACE-enabled ports, e-Manifests represent 74 percent of all manifests filed as of June 1, 2007.

Upon initial implementation of the mandatory e-Manifest policy at land border ports, CBP is exercising enforcement discretion and is providing informed compliance notices to carriers who arrive without submitting or attempting to submit an e-Manifest. This discretionary period will last for a limited time and will be followed by enforcement action against carriers who fail to comply.

Following a thirty-day delay to address problems with ACE messaging capabilities that communicate the status of e-Manifest submissions to carriers, CBP began the enforced compliance of the mandatory e-Manifest policy on April 26, 2007, at land border ports in Washington, Arizona, and eastern North Dakota. In this phase of enforcement, CBP will continue to exercise enforcement discretion for carriers attempting to submit e-Manifests; however, the agency will deny permits to proceed into the United States to carriers who arrive without attempting to submit an e-Manifest in accordance with the e-Manifest requirements outlined in the Federal Register. This phase of enforcement will last for a limited time and will be followed by the final phase of enforcement, in which CBP will deny permits to proceed into the United States to carriers who do not successfully submit an e-Manifest prior to arrival at a port where e-Manifests are

7

required. Monetary penalties may also be assessed against carriers who make no attempt to comply with the requirement to file e-Manifests.

As announced in the Federal Register, the mandatory e-Manifest policy will be expanded to include all land border ports in Vermont, New Hampshire, and the western North Dakota ports of St. John, Fortuna, Ambrose, Carbury, Noonan, Dunseith, Sherwood, Antler, Northgate, Westhope, and Portal, effective July 12, 2007. On August 6, 2007, the policy will be expanded to include all land border ports in Idaho and Montana.

CBP continues to deploy ACE truck processing capabilities to northern land border ports. The agency deployed these capabilities to remaining ports in Maine (including Vanceboro, Forest City, Orient, Houlton, Monticello, Van Buren, Hamlin, Madawaska, Fort Kent, Estcourt, Limestone, Jackman, Coburn Gore, St. Zacharie, St. Aurelie, St. Pamphile, St. Juste, Fort Fairfield, and Bridgewater), and all land border ports in Minnesota (including Roseau, Grand Portage, Pinecreek, International Falls, Baudette, Lancaster, and Warroad). ACE is now operational at 94 of 99 land border ports. CBP has delayed the deployment of ACE capabilities to land border ports in Alaska and New Hampshire due to longer than expected lead-times needed to establish new satellite communication links for ACE in these states. The deployment of ACE truck processing capabilities to New Hampshire and Alaska land border ports, projected for the fourth quarter of the 2007 fiscal year, will mark the completion of deployment of ACE truck processing capabilities to all land border ports.

ITDS interagency coordination efforts continue to focus on deepening existing relationships with ITDS PGAs, identifying the business requirements of these PGAs, and integrating these requirements with the ACE development process. As a result of ongoing training efforts, there are now more than 220 ACE Secure Data Portal endusers from 26 PGAs.

Thirty-two Government agencies currently participate in ITDS. The ITDS Board of Directors and CBP have identified an additional nine Government agencies that are mandated to participate in ITDS under the Security and Accountability for Every Port Act (SAFE Port Act) of 2006. These agencies include the Drug Enforcement Administration (U.S. Department of Justice); the Bureau of Industry and Security (U.S. Department of Commerce); the Foreign Agriculture Service (U.S. Department of Agriculture (USDA)); the Grain Inspection, Packers, and Stockyard Administration (USDA); the U.S. Coast Guard (DHS); the Office of Fossil Energy (Department of Energy); the Centers for Disease Control and Prevention (U.S. Department of Health and Human Services); the Bureau of Political Military Affairs (U.S. Department of State); and the Bureau of Oceans and International Environmental and Scientific Affairs (U.S. Department of State). Each agency has received a formal invitation to join ITDS from the Secretary of the Treasury. Three of the agencies listed above (the Drug Enforcement Administration, the Bureau of Industry and Security, and the Foreign Agriculture Service) have joined ITDS in response to the SAFE Port Act. Initial outreach meetings have been conducted with the remaining five agencies, and their decisions on ITDS participation are anticipated shortly.

As outlined in the SAFE Port Act, ITDS will be monitored by an interagency steering committee. The standing ITDS Board of Directors has been confirmed by the Secretary of the Treasury as fulfilling this requirement and will continue to provide governance for ITDS while implementing the applicable remaining provisions of the SAFE Port Act, such as developing the annual Congressional report and monitoring the adherence of the data harmonization effort with World Customs Organization and World Trade Organization standards.

Trade community participation in ACE continues to rise. ACE periodic monthly statement receipts grew to more than \$753 million in May 2007, representing more than 34 percent of all duties and fees. Overall, there are more than 9,600 ACE Secure Data Portal accounts, and more than 6,400 corporate entities (based on Importer of Record numbers) are approved to pay duties and fees via ACE.

CBP continues to work on the development of Cargo Control and Release (CCR) capabilities. Performance tests using production rail and sea manifest data successfully identified and helped resolve potential performance issues prior to the scheduled May 2008 TRR. As preparations for the TRR for ACE Rail and Sea Manifest (M1) features continue, and design work begins on M2 capabilities, including Air and Conveyance Management System and Full Multi-Modal Manifest capabilities, CBP is moving forward in developing ACE multi-modal manifest capabilities.

Preparations continue for the fourth quarter FY07 release of ESAR Master Data and Enhanced Accounts (A1) capabilities. On April 23, 2007, CBP implemented a modular, computer-based training package, informally known as "Office for ACE," which provides internal users of forthcoming A1 capabilities online "refresher" tutorials on Microsoft Word, Microsoft Excel, and Internet navigation. Completion of the June 2007 A1 TRR signals that capabilities are ready to proceed to the Production Readiness Review (PRR) in preparation for the August 2007 deployment of A1 capabilities. These capabilities will provide ACE account holders with electronic access to account-related master, reference, and transactional data; expand ACE account types to include nearly every entity doing business with CBP; and set the stage for an account-based approach to managing entities conducting business with CBP. In addition, A1 will further expand PGA capabilities in ACE, including the ability to obtain needed trade data and enhanced oversight of Foreign Trade Zone activities.

CBP continues to work diligently on the development of future ESAR: Entry Summary and Revenue (A2) capabilities. CBP is analyzing options for fielding A2 and other future ACE capabilities in smaller groups of related functionality as part of efforts to reduce interdependencies between ACE releases and deliver new ACE capabilities as quickly as possible. The results of this analysis will be included in the annual update to the ACE program plan, which is currently under development, as well as the next edition of this report.

5.3 Near-Term Milestones

The following are key near-term milestones scheduled between July 1, 2007, and September 30, 2007.

July 2007

- On July 12, 2007, truck carriers entering the United States through land border ports in Vermont, New Hampshire, and the North Dakota ports of St. John, Fortuna, Ambrose, Carbury, Noonan, Dunseith, Sherwood, Antler, Northgate, Westhope, and Portal will be required to file e-Manifests one hour before arrival or half an hour prior to arrival if they are participants in the FAST program.
- Completion of the PRR for ESAR: Master Data and Enhanced Accounts (A1) capabilities on July 11, 2007, will indicate that the system is ready to be put into production on a test basis and that the initiation of deployment activities can begin.
- CBP will hold an internal ESAR Field Readiness Network Conference,
 July 16-17, 2007, to brief Field Readiness Coordinators, Assistant Directors of Field Operations, and port leadership on ESAR: Entry Summary and Enhanced Accounts (A1) capabilities in preparation for the August 2007 deployment.
- CBP will conduct an internal National Truck Manifest Conference, July 18-19, 2007, to brief field staff on the status ACE truck manifest deployment; share lessons learned from the deployment of truck manifest capabilities and the implementation of the mandatory e-Manifest policy; and provide Headquarters staff an opportunity to discuss e-Manifest operating procedures with CBP staff in the field.
- CBP will complete the Preliminary Design Review (PDR) for e-Manifest: Air Manifest and Cargo Release (M2) Air and Conveyance Management System capabilities, signaling that early designs have been approved and detailed design work can begin.

August 2007

- On August 6, 2007, truck carriers entering the United States through land border ports in Idaho and Montana will be required to file e-Manifests one hour before arrival or half an hour prior to arrival if they are participants in the FAST program.
- CBP will begin deploying ESAR: Master Data and Enhanced Accounts (A1)
 capabilities to the field following the completion of the Operational Readiness
 Review (ORR).
- CBP projects that ACE truck processing capabilities will be deployed to Pittsburgh, New Hampshire, and all land border ports in Alaska, including Dalton Cache,

Skagway, and Alcan, marking the full deployment of ACE truck processing capabilities.

September 2007

- CBP will implement a system interface between ACE and the FMCSA Query Central system that will facilitate the transmission of e-Manifest data used by FMCSA to conduct pre-arrival screening of this data.
- On-site support will be provided for CBP personnel whose job responsibilities have been affected by the implementation of ESAR A1 capabilities.

6. Program Performance – Screening and Targeting Capabilities

This section discusses the status of Screening and Targeting capabilities, including recent accomplishments, an overall assessment of these capabilities, and projected near-term milestones.

6.1 Selected Accomplishments

The following are selected program accomplishments between April 1, 2007, and June 30, 2007.

April 2007

• **Deployed Targeting Framework (TF) capabilities.** CBP successfully completed development and deployed the second quarterly drop (Increment 4.0) TF enhancements to the field on April 28, 2007.

May 2007

- Deployed Advanced Targeting Drop 3 capabilities. CBP successfully completed development and deployed enhancements to the user defined rules and impact assessment, and optimization to the Rule Manager on May 12, 2007.
- Successfully received DHS Production Readiness Review (PRR) certification for the Targeting Framework (TF) by the Department of Homeland Security (DHS) Chief Information Officer (CIO). CBP successfully obtained certification, which indicates that the TF is proceeding according to DHS PRR standards on May 29, 2007.

June 2007

Completed the Test Readiness Review (TRR) for Advanced Targeting (S3).
 CBP completed the S3 TRR on June 7, 2007, which ensured that the system is ready for additional testing.

6.2 Program Assessment

On April 28, 2007, CBP successfully completed development and deployed mission critical Targeting Framework's (TF) second quarter (Increment 4.0) enhancements to the field. These enhancements include automatic logs of the day creation, extended audit log functionality, refined prioritization of activities, and the addition of the express consignment entity. Automatic logs of the day creation replaces a previously manually performed process to create events, which track negatively vetted passengers or cargo entities. The extended audit log functionality enables CBP managers to track activity and staff progress during daily operations. The refined prioritization of activities ensures that TF users will quickly process individuals or entities that are of the highest interest. Also, the express consignment entity allows for cargo analysts to process specific shipment types separate from general cargo entities.

CBP continues to monitor TF usage at the National Targeting Center (NTC) with the enhanced reporting mechanisms. This case management tool automates the NTC targeting analyst's research process associated with cargo and passenger movements that have been identified as a risk. The analyst's research is tracked in the TF as an event. The number of events created during the months of April and May 2007 were 8,383 and 8,086, respectively. The automation of this process has greatly increased the efficiency of analyst research time on an event, which was previously manual.

On May 29, 2007, CBP successfully received DHS Production Readiness Review (PRR) certification for the Targeting Framework (TF) by the Department of Homeland Security (DHS) Chief Information Officer (CIO). This certification indicates that the TF is proceeding according to DHS PRR standards. CBP conducted the DHS PRR review on November 28, 2006, and continued to work with the DHS Program Assessment and Design Review Team to meet this certification.

CBP successfully completed the Test Readiness Review (TRR) for Advanced Targeting (S3) on June 7, 2007. S3 will now move to the Systems Acceptance Testing (SAT) environment, which provides for additional testing of the system.

CBP is working with the DHS CIO to achieve certification of the Advanced Targeting (S3) Critical Design Review, which was conducted on March 29, 2007. CBP will take action, as appropriate, based on the conclusions of this review. CBP will work with the DHS CIO to certify that the ACE S3 release is ready to proceed beyond the CDR milestone.

Advanced Targeting drop capabilities combined the Screening Foundation (S1) and Automated Targeting System (ATS) targeting capabilities into a single platform that leverages new methods for developing targets while incorporating existing ATS targeting concepts. This approach allowed a seamless integration of functionality without interruption of services to the users. The key targeting concepts introduced via the Screening and Targeting drops have modernized and enhanced the current ATS operations to facilitate greater risk management. CBP will continue introducing specific Advanced Targeting drop user capabilities and enhancements on a quarterly basis.

Recently, CBP deployed the third Advanced Targeting quarterly drop, which provides further enhancements to user defined rules and impact assessment, and optimization to the Rule Manager on May 12, 2007.

CBP continues to prepare for the upcoming milestones: July 2007 third quarterly drop (Increment 5.0) for TF; July 2007 Production Readiness Review (PRR) for S3; August 2007 Operations Readiness Review (ORR) for S3; August 2007 Advanced Targeting Drop 4; and September 2007 Full Operational Capability (FOC) for S3. Based on the status of these preparations to date, the Screening and Targeting releases continue on schedule with no potential risk for delay.

6.3 Near-Term Milestones

The following are key near-term milestones scheduled between July 1, 2007, and September 30, 2007.

July 2007

- CBP will complete the third quarterly drop (Increment 5.0) for TF, which is planned to provide new user capabilities and enhancements.
- CBP will complete the Production Readiness Review (PRR) for Advanced Targeting
 (S3) capabilities, which will indicate that S3 capabilities are ready to move to a pilot
 phase pending certification by the DHS Chief Information Officer (CIO) that S3 is
 ready to proceed beyond PRR. CBP will work with the DHS CIO to obtain
 certification that Advanced Targeting is ready to move beyond the PRR milestone.

August 2007

- CBP will deliver Advanced Targeting Drop 4, which will provide new functionality.
 Key functionality includes workflow, role based port access hierarchy, and additional targeting elements.
- CBP will complete the Operational Readiness Review (ORR) for Advanced Targeting (S3) capabilities. Upon completion of the ORR, the new system may be deployed into full operation.

September 2007

- CBP will deliver Advanced Targeting Drop 4, which will provide new functionality.
 Key functionality includes workflow, role based access hierarchy, and additional targeting elements.
- CBP will deploy Advanced Targeting (S3) capabilities to the field. The operational
 use of the newly deployed S3 at the National Targeting Center will further enhance
 the agency's Screening and Targeting capabilities.

7. Open GAO Recommendations

The following section summarizes open GAO recommendations and CBP efforts to fully address these recommendations. Where appropriate, consolidated responses on like topics are provided below. Each response references both the Audits and Reviews Tracking System (ARTS) number used by the CBP Office of Information and Technology (OIT) and the GAO to track the status of each open recommendation as well as the number of the original GAO report from which the recommendation derives. Appendix C demonstrates the alignment between GAO recommendations and the responses contained in this report.

7.1 Cost Estimating

The GAO recommended that Modernization expenditure plans be based on cost estimates that are reconciled with independent cost estimates (ARTS 1595/GAO-05-267).

As part of its review of both the FY 2005 and FY 2006 Modernization Expenditure Plans, the GAO found that the Modernization Program had implemented its recommendation. The third annual reconciliation of cost estimates is complete, and CBP shared the results of this reconciliation with the GAO as part of the review of the FY 2007 Modernization Expenditure Plan. The agency believes that this information, coupled with the GAO's positive findings in each of the past two years, should provide sufficient evidence of the institutionalization of cost estimate reconciliations to close this recommendation.

The GAO also recommended that CBP develop and implement a rigorous and analytically verifiable cost-estimating program that is consistent with standards established by the Software Engineering Institute (SEI) (ARTS 1403/GAO-02-545).

GAO has recognized that CBP established a disciplined cost-estimating process and made significant progress in implementing this recommendation by: (1) defining and documenting processes for estimating program costs; (2) hiring a contractor to develop independent life cycle cost estimates that enable an independent government analysis and validation of primary cost and schedule; and (3) tasking a support contractor with evaluating both the independent and the CBP estimates against the Software Engineering Institute's (SEI) cost-estimating criteria. A September 2006 report by an independent contractor found significant conformance with SEI cost-estimating practices and determined that the cost-estimating methodology for ACE is consistent across all program areas. Based on the aforementioned progress and the recent findings by the independent contractor, CBP recommends that the GAO consider closing this recommendation.

7.2 Human Capital Management

The GAO has recommended that CBP develop and implement the missing human capital management practices discussed in this report [including identification of how commitments in the human capital management strategy will be met, what steps will be taken, and what resources are needed to execute the steps], and until this is accomplished, report to its Appropriations Committees quarterly on the progress of its efforts to do so (ARTS 1400/GAO-03-406). In its most recent report, the GAO recommended that this strategy be included in the June 30, 2006, Report to Congress on ACE (ARTS 1765/GAO-06-580).

As discussed in past editions of this report, the Cargo Systems Program Office (CSPO) developed the CSPO Strategic Human Capital Management Plan (SHCMP) (an ACE program-specific iteration of the OIT SHCMP), which the CBP Commissioner approved (as further directed by Congress) on June 16, 2006. The five key goals of the CSPO SHCMP and attendant strategies for achieving these goals were included as an appendix to past editions of this report. GAO representatives indicated during an August 29, 2006, meeting with ACE program leadership that the ACE human capital plan lacks a gap analysis of ACE program human capital needs, and that contractors should be included in the program's human capital plan.

In an effort to better address GAO recommendations on human capital, CBP representatives met on October 31, 2006, with the GAO Director of Information Technology (IT) Systems Issues to discuss the ACE human capital strategy. During this meeting, CBP representatives discussed how the 2005 reorganization of the Office of Information and Technology (discussed in previous editions of this report) was based on a gap analysis of human capital requirements that was used to plan the number and type of required positions across OIT. In June 2007, CBP provided GAO with additional documentation on the analysis that supported the reorganization. The implementation plan has been completed and is currently under review by CBP management. CBP continues to work actively to fill all vacant positions within CSPO, and as of June 1, 2007, only 1 full time equivalent position allotted to ACE remains vacant.

During the October 31, 2006, meeting, CBP representatives also described how the prime contractor is contractually obligated, by task order, to fulfill any human capital requirements necessary for task order completion. As such, the prime contractor assesses and manages human capital requirements at the task order level. In effect, the prime contractor is included in the overall ACE human capital plan. CBP representatives understand that the GAO acknowledges that the foregoing approach is a valid method for including the prime contractor in the ACE human capital planning efforts.

7.3 ACE Support for Other Homeland Security Applications

The GAO has recommended that CBP take appropriate steps to have future ACE expenditure plans specifically address proposals or plans to extend or use ACE infrastructure to support other homeland security applications (ARTS 1462/GAO-03-406).

CBP has not planned any ACE expenditures that would enable ACE *infrastructure* (equipment such as hardware environments) to support other homeland security applications. However, ACE program leadership is actively working to coordinate ACE with other homeland security *applications* (IT systems that provide tools and information to help front line officers ensure the security of our Nation). Although these coordination efforts have not resulted in the identification of specific cost savings for the ACE program or other related homeland security programs, OIT anticipates that this coordination will directly advance the agency's trade facilitation and homeland security goals. Specific examples of this coordination include the following:

- OIT is taking steps to ensure that CBP systems, including ACE and the Automated Targeting System (ATS), are compliant with the Service Oriented Architecture (SOA) that was developed by OIT and adopted by the DHS CIO Council. Compliance with the SOA will facilitate any future efforts to leverage ACE and ATS capabilities across the Department.
- ACE S&T capabilities are being integrated with ATS. The modernized ATS will
 provide new S&T capabilities and will enable greater flexibility to incorporate
 emerging technologies in the future. S&T capabilities have been developed in close
 collaboration with the NTC to provide accelerated functional support for its
 operations.
- ACE is leveraging the existing Treasury Enforcement Communications System to provide front line officers with commercial truck license plate and driver query capabilities.
- Entry Summary, Accounts, and Revenue (ESAR): Master Data and Enhanced Accounts (A1) capabilities will provide both CBP and trade representatives the ability to view the status of Customs-Trade Partnership Against Terrorism (C-TPAT) program participation.
- ACE is being coordinated with the U.S.-Mexico Border Partnership Plan. This
 coordination will enable ACE to implement any cargo screening standards that are
 derived from Partnership Plan agreements.
- ACE is being coordinated with the Shared Border Accord Coordinating Committee, which is jointly sponsored by CBP and the Canada Border Services Agency (CBSA).
 This coordination allows CBP and CBSA to address key issues and review progress

under the U.S.-Canada Shared Border Accord, including border security and facilitation.

CBP continues to coordinate with other federal agencies through ITDS.

7.4 Measurement Program Management Improvement Efforts

The GAO has recommended that CBP define measures as well as collect and use associated metrics for determining whether prior and future program management improvements are successful (ARTS 1597/GAO-04-719).

OIT has implemented, and will continue to implement, multiple program management improvements. First, OIT has been systematically consolidating and aligning ACE prime contractor and CSPO processes and tools across the ACE program. The number of CSPO process asset documents were reduced by 42 percent as of February 1, 2007. In particular, OIT has reduced costly high-level plan and process documents by 56 percent and 47 percent respectively. This systematic consolidation has resulted in a reduced number of documents that describe *what* work is done in favor of more valuable process documents that outline *how* to execute critical program processes and activities. OIT expects to continue reducing the number of process asset documents until an appropriate equilibrium is achieved between the number of process assets, the type of process assets, and the cost of maintaining process assets.

Second, OIT has streamlined the ACE configuration management process. Specifically, OIT has improved the efficiency of the CSPO Change Control Board by adopting a two-track Change Request (CR) process, whereby CRs that incur no additional cost are approved by the appropriate CSPO director, and CRs that incur additional costs are approved via review by all CSPO directors. Change Control Board meetings, attended by CSPO directors, have been reestablished to provide a forum for deliberating whether cost-incurring CRs should be approved, resulting in recommendations for disposition by the CSPO Executive Director.

Third, OIT has streamlined the ACE requirements management (RM) process. All requirements changes now undergo CSPO-wide review by appropriate staff members prior to disposition. Members of the RM team are an integral part of the review process for proposed new requirements for forthcoming ACE capabilities. In addition, a Cargo Requirements Management Board (CRMB) has been chartered and established to determine the disposition of proposed requirements changes. Efficiency has been further enhanced through the introduction of the "Great Idea Form" (GIF). GIFs are used to propose new requirements that could previously be proposed only via the formal CR review process. Submission of a GIF to the CRMB serves as a preliminary selection process for identifying and pursuing beneficial requirements that warrant further analysis. As a result, the time and cost of the extensive analysis entailed in preparing a formal CR can be avoided for those requirements that do not merit further analysis. Each GIF that is not approved, therefore, represents a savings of time and effort that would have been spent on preparing a formal CR.

CSPO has received 201 ideas via the GIF to date. One hundred twenty-five (62.2 percent) were rejected either because the proposed functionality (1) already exists; (2) is being planned as part of an existing release; or (3) does not fit within the scope of ACE as planned. There are 20 GIFs (10 percent) that are currently being reviewed. Of these 20 GIFS, 11 (5.5 percent) have been deferred to be re-reviewed at a later date when more information is available, and one (0.5 percent) has been forwarded for review by another CBP office with primary responsibility for the proposed enhancement. Thirty-six (17.9 percent) have been approved and have been sent to the CR process to enable CSPO to review the proposed cost/effort and determine if the implementation is a viable option.

Fourth, OIT recognized in 2005 that the prime contractor's personnel turnover rate of 62 percent per year was unacceptably high and directed that it be reduced in view of the direct effect of staff turnover on project cost¹. As of May 2007, the prime contractor's annual personnel turnover rate is 32 percent. Figure 1, below, shows a downward trend of the turnover rate. The prime contractor continues to look at new ways of reusing personnel once they have completed their original tasks. By reusing personnel, the ACE program has saved costs associated with new background investigations, training for new personnel, and the "learning curve" of new employees. While still high, the prime contractor continues to work on reducing staff turnover, and the ACE program office continues to monitor the progress of this effort.

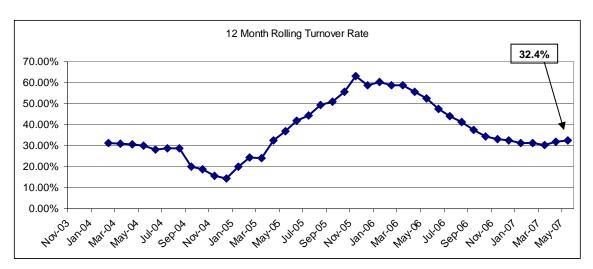


Figure 1: Prime Contractor Rolling 12 Month Staff Turnover Rate

In view of these efforts, CBP recommends that the GAO consider closing this recommendation.

Staff turnover has the following direct effect on project cost (based on the industry-standard cost-estimating tool COCOMO):

^{- 12%} staff turnover - No additional project cost due to turnover rate (nominal)

^{- 24%} staff turnover - 12% additional project cost due to turnover rate

^{- 48%} staff turnover - 29% additional project cost due to turnover rate

7.5 Accountability Framework

The GAO has recommended that CBP implement an accountability framework that covers all program commitment areas, including key expected or estimated system (1) capabilities, use, and quality; (2) benefits and mission value; (3) costs; and (4) milestones and schedules (ARTS 1736/GAO-05-267). In its most recent report, the GAO also recommended that this framework be included in the June 30, 2006, edition of this report (ARTS 1765/GAO-06-580).

ACE program leadership has implemented the use of the ACE accountability framework as described and depicted in past editions of this report. Used as the basis for Program Management Reviews (PMR), the framework provides a comprehensive assessment of ACE capabilities, cost, schedule, earned value management (EVM) indicators, program risks, mission values and benefits (relative to Department and agency strategic goals), as well as business performance measures and targets. CSPO continues to report and discuss cost, schedule, earned value management indicators, program risks, and ACE benefits on a monthly basis at internal directors' integration meetings. Beginning in the fourth guarter of FY07, CBP will move to a guarterly PMR that includes CBP management and oversight representatives. The quarterly PMR, which will be held shortly after the completion of a given fiscal quarter, will be aligned with the content in the Report to Congress on ACE for that guarter. The guarterly PMR will allow CBP to provide external stakeholders with more mature information, a more comprehensive assessment of ACE in relation to the accountability framework, and ultimately a greater perspective of the ACE program as a whole. The first quarterly PMR is scheduled for July 2007. Based on the institutionalized use of the ACE accountability framework and the development of ACE performance measures as discussed in Section 7.11, CBP recommends that the GAO consider closing the foregoing recommendation.

As part of its recommendations on establishing an accountability framework, the GAO has also recommended that CBP ensure the currency, relevance, and completeness of commitments made to the Congress in expenditure plans (ARTS 1737/GAO-05-267). The GAO also recommended that CBP report in future expenditure plans progress against commitments contained in prior expenditure plans (ARTS 1739/GAO-05-267).

CBP recognizes GAO concerns regarding the time required to complete the expenditure plan approval process prior to transmitting expenditure plans to Congress. The agency continues efforts to expedite the expenditure plan approval process and will ensure that future expenditure plans contain the timeliest information available when the review process is initiated. To ensure that future expenditure plans report progress against commitments contained in prior expenditure plans, CBP included the ACE accountability framework as an appendix to the FY07 Expenditure Plan. The ACE accountability framework tracks milestones and other program commitments made in all prior expenditure plans. It also includes specific planned and actual cost data.

The GAO has also recommended that the accountability framework ensure the establishment of reliable data relevant to measuring progress against commitments (ARTS 1738/GAO-05-267).

Although the ACE accountability framework does not report on the status of this recommendation, OIT has undertaken several measures to establish reliable data. The following is a summary of these measures, which have been detailed in past editions of this report:

- CBP has combined Problem Tracking Report (PTR) tracking under a development team to improve reporting on system performance.
- Remedy software is used to track all trouble tickets; notify ACE users via e-mail
 when trouble tickets can be resolved only through the resolution of a PTR; and notify
 ACE users via e-mail when resolution and implementation of a PTR will result in
 closure of a trouble ticket.
- CBP is ensuring that Dimensions, a configuration management software tool that is also used to track system defects, is current and provides an accurate inventory of all PTRs.

In view of these efforts, CBP recommends that the GAO consider closing this recommendation.

7.6 ACE Program Quarterly Reporting

The GAO has recommended that CBP accurately report quarterly to the Appropriations Committees on the agency's progress in implementing open GAO recommendations (ARTS 1598/GAO-04-719 and ARTS 1764/GAO-06-580).

CBP has been providing quarterly reports on ACE since November 2002 in response to language contained in reports that accompany annual Appropriations Acts, the Customs Border Security Act of 2002 (Trade Act of 2002), and the GAO reporting requirements indicated in this recommendation. Appendix C demonstrates the alignment between GAO recommendations and the responses contained in this report. CBP will continue to report on efforts to fully address open GAO recommendations through quarterly reports on ACE.

7.7 Satisfaction of Legislative Conditions

The GAO has recommended that the DHS Secretary direct the appropriate departmental officials to fully address the legislative conditions associated with having an approved Privacy Impact Assessment (PIA) and ensuring architectural alignment (ARTS 1762/GAO-06-580).

On July 14, 2006, DHS approved and published the ACE PIA at http://www.dhs.gov/xlibrary/assets/privacy/privacy_pia_cbp_aceitds.pdf. CBP recommends that the GAO consider closing its recommendation on the PIA.

DHS has established a methodology for evaluating ACE compliance with the DHS Enterprise Architecture (EA) as part of the FY07 Modernization Expenditure Plan development process. Based on this methodology, a review of ACE compliance with the DHS EA was completed, and on March 29, 2007, DHS found that ACE is architecturally aligned to the DHS EA. In addition, the DHS CIO is evaluating the compliance of ACE releases with the DHS EA as part of efforts to certify that releases are ready to proceed beyond the Critical Design Review (CDR) and Production Readiness Review (PRR) milestones. This review process is described below in Section 7.8.

The GAO has also recommended that CBP fully address those legislative conditions associated with employing effective Independent Verification and Validation (IV&V) practices (ARTS 1763/GAO-06-580).

As discussed in previous editions of this report, CBP has adopted an IV&V Implementation and Management Plan (IMP), which is designed to ensure that IV&V efforts are aligned with the Institute of Electrical and Electronic Engineers (IEEE) 1012-2004 standard. The IV&V IMP, Version 4.1, like the previous two versions, addresses satisfaction of quality standards for all ACE products, as well as the validation of needs (as defined through requirements, use cases, and design documents). CBP provided the IV&V IMP, Version 4.1, to the GAO in March 2007 and recommends that the GAO consider closing its recommendation on IV&V.

7.8 Risk of Severe Defects

The GAO has recommended that the accountability framework use criteria for exiting key readiness milestones that adequately consider indicators of system maturity, such as severity of open defects (ARTS 1740/GAO-05-267). The GAO has also recommended that key milestone decisions should be documented in a way that reflects the risks associated with proceeding with unresolved severe defects and provides for mitigating these risks (ARTS 1766/GAO-06-580).

Past editions of this report have described the OIT process for holding a Systems Life Cycle (SLC) review, which includes the use of standard gate review briefing templates, formal gate review pre-briefs to ensure verification of PTR measures, and formal gate review meetings. The ACE program office is also ensuring that gate review decisions are based on documentation that includes risks and their associated impact. Risks are entered in the risk management tracking system, Active Risk Manager (ARM), to ensure that CBP has visibility of these risks and can take action to mitigate them as appropriate. The June 4, 2007, ESAR: Master Data and Enhanced Accounts (A1) Test Readiness Review provided an opportunity to observe how CSPO documents risks

during an SLC review. The July 2008 PRR for Rail and Sea Manifest (M1) capabilities will provide the next opportunity to observe this process.

As further directed by Congress, CBP is coordinating with the DHS CIO to ensure that releases are ready to proceed beyond the CDR and PRR milestones. The A1 CDR was certified by DHS on October 25, 2006. DHS certified the M1 CDR on December 19, 2006.

CBP successfully received DHS PRR certification for the Targeting Framework (TF) by the DHS CIO on May 29, 2007.

CBP is working with the DHS CIO to achieve certification of the Advanced Targeting (S3) CDR, which was conducted on March 29, 2007. CBP will take action, as appropriate, based on the conclusions of this review. CBP will work with the DHS CIO to certify that the ACE S3 release is ready to proceed beyond the CDR milestone.

7.9 Concurrent Development

The GAO has recommended that CBP minimize the degree of overlap and concurrency across ongoing and future ACE releases. CBP should also capture and mitigate the associated risks of any residual concurrency (ARTS 1767/GAO-06-580).

Past editions of this report have detailed CBP efforts to reduce the level of concurrent ACE development and mitigate the risk of remaining concurrent development efforts. Key elements of these efforts include the decoupling of S&T releases from ACE secure cargo management releases to reduce interdependencies between development efforts; the use of ARM software to track release-specific risks; and the establishment of a comprehensive program management foundation for managing ACE requirements, cost, schedule, and performance.

CBP has also taken the following actions to reduce potential contention for common resources across ACE releases:

- Program managers have conducted extensive planning to ensure that development milestones eliminate contention for computer hardware environments needed for development, integration, testing, and training activities.
- CBP is centrally managing underlying ACE shared software services to maximize
 the efficient use of resources, enhance responsiveness to workload peaks, and
 provide consistent technical management approaches across releases.
- ACE releases have been divided into smaller groups of capabilities or "drops." Task
 orders for ACE drops will include not only development of the drop, but also the key
 activities that are indispensable to fielding new ACE capabilities, such as
 architecture and engineering, environment planning and construction, program
 management, training, and deployment. A single manager will be appointed as the

drop manager with overall responsibility for delivery of the drop. This comprehensive approach to drops will provide enhanced oversight through the use of EVM analysis both at the level of the specific activities required to field a drop as well as analysis of the drop as a whole (including all supporting activities). The overall result will be comprehensive, integrated scope, cost, and schedule management for the drop.

7.10 Earned Value Management

The GAO has recommended that CBP use Earned Value Management (EVM) in the development of all existing and future releases (ARTS 1768/GAO-06-580).

CBP uses EVM to manage all ACE releases under contract. EVM standards are implemented on ACE releases following the establishment of a performance baseline at an Integrated Baseline Review (IBR). IBRs are held within 45 days of the conclusion of contract negotiations. The agency implemented EVM standards for ACE Advanced Targeting capabilities upon establishment of the performance management baseline at the IBR for initial S3 initiatives, held October 23, 2006. A subsequent IBR for S3, Advanced Targeting project, was held on February 2, 2007.

IBRs were recently held and baselines were approved for the following task orders (TOs):

- TO 28 (Foundation Program Management): January 22, 2007
- TO 22 (Cargo Control & Release): January 31, 2007
- TO 24 (Advanced Targeting (S3)): February 9, 2007
- TO 27 (Cargo IT Services and Support): February 15-16, 2007
- TO 31 (International Trade Data System): February 20, 2007
- TO 23 (Master Data and Enhanced Accounts (A1)): March 22, 2007

TO 22 (e-Manifest: Air Manifest and Cargo Release (M2)) and future task order IBRs will be held as required within 45 days of the conclusion of contract negotiations. In the near future, consolidated IBRs will be held to align all direct and indirect charges from current task orders for each software delivery.

In view of these efforts, CBP recommends that the GAO consider closing this recommendation.

7.11 Performance Measures

In its most recent report, the GAO recommended that CBP explicitly align ACE program goals, benefits, desired business outcomes, and performance measures (ARTS 1770/GAO-06-580); develop the range of realistic ACE performance measures and targets needed to support an outcome-based, results-oriented accountability framework (ARTS 1769/GAO-06-580); and fully address those legislative conditions associated with measuring ACE performance and results (ARTS 1763/GAO-06-580). Congress

further directed CBP to align its goals, benefits, desired business outcomes, and performance metrics.

In accordance with the aforementioned GAO recommendations and Congressional directive, CBP established a framework for the ACE performance measurement program based on the CBP Performance Reference Model (PRM). ACE performance measures were certified as complete and aligned with the CBP and DHS strategic plans via memoranda from the CBP Commissioner and the DHS CIO on June 30 and July 6, 2006, respectively.

CBP has also developed the "critical few" performance measures to support the ACE accountability framework. These performance targets, depicted in Appendix D, represent the subset of ACE performance measures from the CBP PRM for ACE based on the primary functionality of each planned ACE release. CBP is implementing the use of system and survey generated data to measure the performance of ACE relative to these targets and report this performance in the ACE accountability framework. As ACE proceeds through its life cycle, CBP will update measures and targets, as appropriate, based on lessons learned, changes to system capabilities, and further refinement of the requirements for future ACE releases. Further, Appendix D includes actual data through the second quarter FY07 for the performance measures associated with ACE releases deployed to date (Releases 2, 3, and 4).

Based on completion of efforts to align ACE performance measures with program goals and outcomes, and the establishment of specific realistic performance targets to support the accountability framework, CBP has recommended that the GAO consider closing its findings related to performance measurement.

8. Program Baseline

8.1 Overall Schedule and Cost

CBP continues to manage to the Acquisition Program Baseline, which reflects a \$3.3 billion program that will attain Full Operational Capability (FOC) by August 2011. Baseline schedule and cost estimates were validated through an Independent Government Cost Estimate.

8.1.1 Detailed Development and Deployment Schedule

Appendix E, Schedule Outlook, compares the current outlook for ACE development and deployment milestones with the program baseline.

8.2 Fiscal Status

The FY07 ACE Expenditure Plan, approved by Congress on April 18, 2007, provided \$316.8 million for the design and development of Secure Cargo Management and Screening and Targeting capabilities. To date, Congress has appropriated and

released \$2.02 billion for ACE/ITDS. Of this amount, \$1.92 billion has been obligated, and \$1.68 billion has been expended (95 percent and 83 percent of released funding, respectively) as of May 31, 2007. Figure 2 provides a summary of ACE funding.

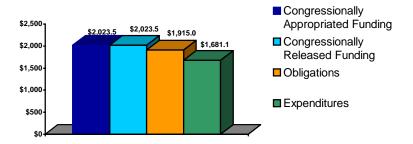


Figure 2: ACE and ITDS Funding Status as of May 31, 2007

9. Conclusion

Expansion of the mandatory requirement to file electronic truck manifests prior to arrival at a U.S. land border port of entry continues to signal the operational maturity of ACE truck cargo processing capabilities. The mandatory e-Manifest policy is now in effect across the entire Southern Border and nearly 40 ports along the Northern Border. Results continue to show that e-Manifests are delivering on their promise to reduce truck processing times, enabling CBP officers to devote more time to inspecting suspicious cargo without delaying the border crossings of legitimate carriers.

With the full implementation of ACE truck manifest capabilities in view, CBP continues to work diligently on future ACE capabilities that will further protect the country from harm while fostering the flow of legitimate trade. New and enhanced Screening and Targeting capabilities continue to automate processes, strengthen risk management capabilities, and improve research efficiency. CBP and the ITDS Board of Directors are making progress toward expanding participation in ACE/ITDS pursuant to the SAFE Port Act. Design work is set to begin on cargo processing and release capabilities that will ultimately allow CBP to consolidate four separate systems and use only one system, ACE, to process cargo across all modes of transportation. The agency is preparing for the August 2007 deployment of A1, which sets the stage for an accounts-based approach to managing all entities doing business with CBP.

Mindful of the critical role ACE plays in ensuring our Nation's physical and economic security, CBP is currently preparing the annual update of the ACE program plan to ensure that ACE capabilities meet the mark when fielded and are deployed as soon as possible. The implementation of ACE is vital to fulfilling the agency's mission to secure our borders and facilitate trade. Accordingly, the agency remains concentrated and committed to the success of the ACE program.

For more information:

Additional information on ACE may be found on the CBP Web site (www.cbp.gov) under the ACE: Modernization Information Systems link.

Previous reports to Congress on ACE may be found on the CBP Web site at http://www.cbp.gov/xp/cgov/toolbox/about/modernization/ace/newsletters/quarterly_reports/

Questions may be directed to:

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Appendix A. Secure Cargo Management Implementation and Capabilities

ACE will deliver increased border security and enable improved trade compliance. It will also increase efficiency and improve customer service for key stakeholders, which include importers, brokers, carriers, and Government agencies.

In June 2003, ACE Account Creation was launched with 41 initial importer accounts given access to the ACE Secure Data Portal. Account Creation provides initial online account capabilities to CBP and the trade community.

Periodic Payment was launched in June 2004, and an ORR was successfully conducted in August 2004. It allows importers and brokers with ACE accounts to centralize payment processing and to utilize periodic monthly statement and payment capabilities through Automated Clearinghouse Credit and Debit. This release also provides an initial customer account-based subsidiary ledger interface with the CBP general ledger for financial transaction processing, and an expanded account view into account activity logs and exam findings.

Periodic Payment expanded the account management framework to a larger trade audience, including brokers, carriers, and CBP representatives overseeing those areas. The account profiles for importers, brokers, and carriers will support some information relevant to C-TPAT. A Significant Activities Log provides a record of communications between the account and CBP (and ultimately with PGAs).

The e-Manifest: Trucks capability, which includes an automated truck manifest, expedited information processing, and a primary inspector interface (consolidating existing separate cargo release systems), was piloted in Blaine, Washington, in December 2004. Following completion of the pilot, the e-Manifest: Trucks capability was deployed to Northern and Southern Border ports near select hub cities. This capability is now operational at 94 of 99 land border ports.

The following is an outline of future ACE Secure Cargo Management capabilities:

ACE Secure Cargo Management Capabilities

Entry Summary, Accounts, and Revenue (ESAR)

- ESAR: Master Data and Enhanced Accounts (A1)
 - Most account types, including broker, carrier, commercial driver, importer, surety, cartman, lighterman, third party claimants, foreign trade zone (FTZ) operator, service provider, warehouse operator, and manufacturer ID/shipper.
 - Master and reference data in ACE
 - Cross-account access
 - Merge accounts

- ESAR: Entry Summary and Revenue (A2)
 - Entry summary processing
 - Liquidation/closeout
 - Post-summary corrections
 - Reconciliation processing
 - Quota/visa processing
 - o Team review processing
 - o Anti-dumping/countervailing duty processing
 - Prior disclosure processing
 - o Protest processing
 - Managed accounts
 - o Licenses, permits, certificates, and other documents
 - o Program participation
 - Finance processing
 - Accounts receivable
 - Collections and receipts
 - o Refunds
 - Bond application storage (e-Bond processing)
 - Bond sufficiency
 - Drawback financials

e-Manifest: All Modes - Cargo Control and Release

- e-Manifest: Rail and Sea (M1)
 - Cargo manifest processing for sea/rail modes of transportation and creation of a unified multi-modal database that will support all modes of transportation
 - Enhanced information reporting and cargo control capabilities, including the following new functionality:
 - Complete vessel itinerary and linkage of vessel stowage plan to cargo manifest for 24-Hour Rule validation
 - Trade community option to use commercial identifiers for in-bond control numbers
 - Custodial power of attorney validation for in-bond controlled cargo movements
 - o E-mail list serve to communicate worldwide with sea/rail trade partners
 - Expanded disposition code field to provide more precision in CBP status notifications related to holds, cargo release, and other dispositions
 - o Expansion of broker download to sea cargo community
 - o Holds placed and removed at the container/rail car level
 - Expanded container/rail car seal reporting and electronic maintenance of seal changes
 - Enhanced PGA participation in sea/rail cargo control environment, including new data sharing and cargo hold capabilities
 - Secure wireless capability for remote access to query cargo manifest information, as well as place and remove holds on cargo in field locations

- Utilization of the United Nations standard data set for vessel stowage plan processing in ACE (Bay Plan/Stowage Plan Occupied and Empty Locations Message (BAPLIE))
- Expansion of information sharing within intermodal community to promote prefiling to enhance targeting and security for CBP and improve third party logistics for the trade community
- e-Manifest: Air Manifest and Cargo Release (M2)
 - Air Manifest and Conveyance Management System
 - Technical modernization and process improvements in air manifest application to include the following new functionality:
 - Electronic submission of landing rights requests from carriers
 - Enable cross-mode movements of in-bond cargo
 - Capability for onward (secondary) carrier to maintain custodial responsibility for in-bond and local transfer movements
 - Capability for trade partners to initiate electronic transfer of liability
 - Data sharing interfaces with PGAs
 - Technical modernization and process improvements in the Conveyance Management System including the following new functionality:
 - Conveyance movement data available to authorized users via the ACE Secure Data Portal
 - Conveyance movement data submitted electronically by trade partners
 - Entrance and clearance data entered by CBP officers via secure wireless device from remote locations (such as onboard a vessel)
 - Automation of paper forms (3171, 1300, 1303, 1304, and others) to provide for electronic submission Bunker fuel reporting submitted electronically by trade partners
 - Enhanced reports for CBP officers
 - Incorporation of PGA informational requirements and electronic transmission of that data to the PGA
 - Full Multi-Modal Database
 - Technical refresh of deployed e-Manifest: Trucks application by incorporating electronic truck manifest data into the ACE multi-modal manifest environment, creating a single technical environment in which all modes of transportation (sea, rail, air, truck, pipeline) will share common databases, common services, and a single user interface, allowing for a true intermodal cargo control and release application environment.
 - Cargo Release
 - Technical modernization and process improvements in the Cargo Selectivity and Border Cargo Selectivity applications that will include the following new functionality:
 - Dynamic interface and advance screening and targeting processes enhancing screening processes and eliminating duplicate screening processes.

- Incorporation of expanded PGA data capture prior to cargo arrival in the United States to improve screening in support of ITDS
- Technical alignment of cargo release and cargo control processes via the multi-modal manifest environment
- Enhanced internal interfaces between cargo control and release applications to support national security through enriched data content and data capture associated with the pre-loading of cargo in foreign ports and places
- e-Manifest: Exports and Mail Entry Writing System (MEWS) (M3)
 - Technical modernization of the Mail Entry Writing System (MEWS) and incorporation of MEWS into the multi-modal manifest environment
 - Technical modernization of conveyance module of the Automated Export System (AES) and incorporation of cargo control component of AES into the ACE multimodal manifest environment
 - Modernization of AES is coordinated with the Foreign Trade Division of the U.S.
 Census Bureau

Exports & Cargo Control

- ESAR: Drawback, Protest, and Importer Activity Summary Statement (IASS) (A3)
 - Drawback
 - Enhanced protest
 - IASS
- e-Manifest: Custodial Entities, Pipelines, and Batch Processes (M4)
 - Manifest, e-Release, enforcement, and tracking for mail, hand-carry, and pipeline

Appendix B. Screening and Targeting Implementation and Capabilities

After the formation of the CBP Targeting and Analysis Systems Program Office (TASPO) on July 1, 2005, and the delivery of the initial Screening Foundation (S1) drop, synergies were immediately evident between S1 and the Automated Targeting System (ATS). ATS is an Intranet-based enforcement tool, incorporating intelligence information and technologies to target suspect inbound and outbound shipments and passengers. S1 developed key functional components like the criteria creation and impact assessment. These were able to be subsumed and enhanced by the Advanced Targeting drop. The Advanced Targeting drop combined S1 and ATS targeting capabilities into a single platform that leverages new methods for developing targets while incorporating existing ATS targeting concepts. This approach allowed a seamless integration of functionality without interruption of services to the users. The key targeting concepts introduced via the Screening and Targeting drops has modernized and enhanced the current ATS operations to facilitate greater risk management.

CBP is introducing specific Advanced Targeting drop user capabilities and enhancements on a quarterly basis. CBP deployed the first Advanced Targeting quarterly drop, including the following capabilities: ATS Simulation and Test Environment, operational performance metrics, centrifuge integration, Dunn and Bradstreet integration (D&B), and Service Oriented Architecture (SOA) technology insertion on September 30, 2006. Recently, CBP deployed the third Advanced Targeting quarterly drop, which provides further enhancement to user defined rules and impact assessment, and optimization to the Rule Manager on May 12, 2007. These enhancements modernize and enhance the current ATS operations.

In October 2006, CBP deployed Targeting Framework (TF) capabilities to the National Targeting Center (NTC). TF replaced the Targeting Framework prototype (in use at the NTC) with a full production-scale system that provides workflow capabilities to support the transfer of "events" from the NTC to and from ports of entry. TF provides the ability to initiate activities, fosters collaboration among analysts, and allows users to exploit past activity logs for additional intelligence by tracking requests for information on entities of interest. TF provides a single access point for integration of external data sources and enables the ability to infer relationships between entities and data elements. TF integrates and provides a "single sign-on" to the following external data sources: Automated Biometric Identification System (IDENT), Enforcement Case Tracking (ENFORCE), the Department of State Consolidated Consular Database (CCD), ATS Narcotics, and ATS Passenger. TF also provides Secured Integrated Government Mainframe Access (SIGMA) capabilities, which enables CBP officers at ports of entry to interact with the NTC (Fraudulent Document Analysis Unit and Passenger Analysis Unit) and export immigration "adverse action" data to a significant number of databases within the Federal Government. TF provides "semantic extraction" that enables a user to attach data "ingests," Internet links, and documents to a record. TF also includes sophisticated ad-hoc reporting features for both system data and workflow metrics as well as initial reporting features through data warehouse

capabilities. CBP will continue introducing specific TF user capabilities and enhancements on a quarterly basis. In view of these critical homeland security capabilities, CBP completed the TF Operational Readiness Review (ORR) and deployed TF capabilities for use by NTC analysts prior to the completion of the Department of Homeland Security (DHS) Production Readiness Review (PRR) review by the DHS Chief Information Officer (CIO). This review was conducted on November 28, 2006. CBP successfully obtained DHS Production PRR certification for the TF by the DHS CIO on May 29, 2007. This certification ensures that the TF is proceeding according to DHS PRR standards.

The following is an outline of the features in future Screening and Targeting releases:

ACE Screening and Targeting Capabilities

Advanced Targeting (S3)

- Additional screening capabilities and extended targeting tools for trend and pattern analysis
 - Enhanced criteria management and criteria impact assessment
 - Extended targeting functionality (identification of anomalies and potential areas for additional CBP attention)
 - Extended screening capability to include additional areas (e.g., ACE accounts)
- Evaluating screening and targeting results
 - Extensions to the CBP Risk Management Cycle (e.g., metrics and compliance measures that will provide insight into, and feedback on, operational and technical targeting effectiveness)

Appendix C. Open GAO Recommendations

The following table lists all open GAO recommendations, the corresponding ARTS tracking number, the original GAO report in which each recommendation was published, and the section or sections of this report, which specifically address each recommendation.

	Recommendation	ARTS Tracking	Original GAO Report	Section(s) of this Report that
		Number	Number	Address(es) GAO Recommendation
1	Ensure that future expenditure plans are based on cost estimates that are reconciled with independent cost estimates.	1595	GAO-04-719	7.1
2	Develop and implement a rigorous and analytically verifiable cost estimating program that embodies the tenets of effective estimating as defined in SEI's institutional and project-specific estimating models.	1403	GAO-02-545	7.1
3	Develop and implement the missing human capital management practices discussed in this report [including identification of how commitments in the human capital management strategy will be met, what steps will be taken, and what resources are needed to execute the steps], and until this is accomplished, report to its Appropriations Committees quarterly on the progress of its efforts to do so.	1400	GAO-03-406	7.2
4	Have future ACE expenditure plans specifically address any proposals or plans, whether tentative or approved, for extending and using ACE infrastructure to support other homeland security applications, including any impact on ACE of such proposals and plans.	1462	GAO-03-406	7.3
5	Define measures, and collect and use associated metrics, for determining whether prior and future program management improvements are successful.	1597	GAO-04-719	7.4
6	Define and implement an ACE accountability framework that fulfills several conditions:			
	a. Covers all program commitment areas, including key expected or estimated system (a) capabilities, use, and quality; (b) benefits and mission value; (c) costs; and (d) milestones and schedules.	1736	GAO-05-267	7.5
	b. Ensures currency, relevance, and completeness of all program commitments made to the Congress in expenditure plans.	1737	GAO-05-267	7.5
	c. Ensures reliable data relevant to measuring progress against commitments.	1738	GAO-05-267	7.5

Appendix C. Open GAO Recommendations, continued.

	Recommendation	ARTS Tracking Number	Original GAO Report Number	Section(s) of this Report that Address(es) GAO Recommendation
	 d. Ensure future expenditure plans report progress against commitments contained in prior expenditure plans. 	1739	GAO-05-267	7.5
	e. Ensure criteria for exiting key readiness milestones adequately consider indicators of system maturity, such as severity of open defects.	1740	GAO-05-267	7.8
7	Report quarterly to the House and Senate Appropriations Committees on efforts to address open GAO recommendations.	1598	GAO-04-719	7.6
8	Direct the appropriate departmental officials to fully address those legislative conditions associated with having an approved privacy impact assessment and ensuring architectural alignment.	1762	GAO-06-580	7.7
9	Fully address those legislative conditions associated with measuring ACE performance and results and employing effective IV&V practices.	1763	GAO-06-580	7.7 7.11
10	Accurately report to the Appropriations Committees on CBP's progress in implementing our prior recommendations.	1764	GAO-06-580	7.6
11	Include in the June 30, 2006, quarterly update report to the Appropriations Committees a strategy for managing ACE human capital needs and the ACE framework for managing performance and ensuring accountability.	1765	GAO-06-580	7.2 7.5
12	Document key milestone decisions in a way that reflects the risks associated with proceeding with unresolved severe defects and provides for mitigating these risks.	1766	GAO-06-580	7.8
13	Minimize the degree of overlap and concurrency across ongoing and future ACE releases, and capture and mitigate the associated risks of any residual concurrency.	1767	GAO-06-580	7.9
14	Use EVM in the development of all existing and future releases.	1768	GAO-06-580	7.10
15	Develop the range of realistic ACE performance measures and targets needed to support an outcome-based, results oriented accountability framework, including user satisfaction with ACE.	1769	GAO-06-580	7.11
16	Explicitly align ACE program goals, benefits, desired business outcomes, and performance measures.	1770	GAO-06-580	7.11

Appendix D. ACE Critical Few Performance Measures

Appendix D depicts the critical few ACE performance measures, which are aligned to CBP strategic goals, objectives, and strategies.

										Targets and Actuals											
	Fielded Increments (as of 5/07)		E		ESAR CCR		CR		FY07	FY07		FY08		FY09		FY10		FY11			
Performance Measurement Indicator	R2	R3	R4	S&T	A1	A2	M1	M2	Planned	Q1 Actual	Q2 Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actuak	Planned	Actual
Percent users satisfied with system usability ¹																					
CBP users	Х	Х	Х	Х	Х	Х	Х	Х	45%	N/A	N/A	50%		55%		60%		65%		70%	
Trade users	Х	Х	Х	Х	Χ	Х	Х	Х	55%	N/A	N/A	60%		65%		70%		70%		70%	
Population of Customs and Border Protection (CBP) workforce using ACE to manage trade information ²	Х								30%	26%	28%	40%		63%		100%		100%		100%	
Number of ACE Trade accounts ³	Х								9000	4,828	7,664	14000		15500		17000		19000		20000	
Percent total duties and fees paid by Periodic Monthly Statement (PMS) ⁴		Х							40%	35%	31%	50%		60%		70%		80%		80%	
Percentage of e-Manifests (truck) ⁵			Х						53%	13%	15%	100%		100%		100%		100%		100%	
Time to process at primary (truck) ⁶			Х						25%	21%	22%	25%		25%		25%		25%		25%	
Total number of linked electronic sources for CBP and other government agencies to conduct screening				Х					16	11	13	19		22		25		28		31	
Number of account types ⁷					Х							3		5		7		9		11	
Percent paperwork reduction for the Trade ⁸						Х								20%		35%		40%		45%	
Percent of entry summaries for which there is no further Trade activity required (as measured by entry summary by-pass; no documents required) 9						Х								94%		95%		95%		95%	
Percent of trade in compliance ¹⁰						Х								N/A		N/A		N/A		N/A	

Appendix D. ACE Critical Few Performance Measures, continued

							Targets and Actuals														
	Fielded Increments (as of 5/07)			ESAR		CCR		ccr 7707			FY08		FY09		FY10		FY11		FY12		
Performance Measurement Indicator	R2	R3	R4	S&T	A1	A2	M1	M2	Planned	Q1 Actual	Q2 Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actuak	Planned	Actual
Average time to remove a hold from non-inbond cargo following arrival ¹¹							Х					TBD		TBD		TBD		TBD		TBD	
Percent reliability of wireless medium ¹²							Х					TBD		TBD		TBD		TBD		TBD	
Number of in bond discrepancies ¹³							Х	Х				TBD		TBD		TBD		TBD		TBD	
Percent customer satisfaction with the seamless filing of Multi- Modal Manifest ¹⁴								Х						TBD		TBD		TBD		TBD	
Percent use of commercial control numbers for in-bond movement tracking (air) 15								Х						TBD		TBD		TBD		TBD	

¹ Targets represent user satisfaction targets as a percentage of total valid user satisfaction surveys received. User satisfaction is defined in terms of a) ease of use; b) system response time; c) data reliability; and d) system availability.

² Targets represent percentage of CBP ACE users as a percentage of the CBP personnel responsible for managing trade information (26,400).

³ Number of ACE trade accounts reflects the extent to which the trade is using ACE to manage trade information.

⁴ Targets represent the income paid via Periodic Monthly Statement (PMS) as a percentage of all revenue due CBP (total secured debt. duties and fees).

⁵ Targets represent truck manifests electronically submitted as a percentage of all truck manifests (paper and electronic) submitted.

⁶ Targets represent the average reduction in truck processing time expressed in terms of pre-ACE processing baselines collected at select, major ports

⁷ Targets represent the expansion of accounts to support a wider variety of CBP and trade users.

⁸ Targets represent the extent to which the range of typical documents associated with cargo transactions can be submitted electronically.

⁹ Targets represent the number of entry summaries bypassed (no documents required) divided by the total number of entry summaries.

¹⁰ Targets unavailable for this measure, which uses a random sample of importation transactions and assesses the extent to which importers have followed documentation, classification, and payment requirements. The results are used to identify areas that need improvement and help determine field resources and areas of concentration to achieve improved trade compliance rates.

¹¹ Targets represent time associated with cargo holds removed through the use of the ACE wireless cargo processing tool compared to conventional means.

¹² Targets represent percentage of completed wireless communications as a percentage of total wireless communication attempts.

Targets represent the number of en-route shipments not in accordance with applicable statutes and regulations.

¹⁴ Targets represent user satisfaction targets as a percentage of total valid user satisfaction surveys received.

¹⁵ Targets represent the extent to which the commercially-assigned cargo control number is used throughout the cargo importation process.

Appendix E. Schedule Outlook

The following table compares ACE Program Plan Version 11.2 Development Milestones (program baseline) with current projections.

Release Name	Key Milestone	Acquisition Program Baseline	Current Outlook
ESAR ■ ESAR: Master Data and Enhanced Accounts (A1)	PRR	07/17/06	07/12/07
	ORR	12/19/06	08/09/07
	FOC*	09/08/08	08/11/07
ESAR: Entry Summary and Revenue (A2)	PRR	07/17/06	07/10/08
	ORR	12/19/06	10/30/08
	FOC	09/08/08	11/27/08
e-Manifest: All Modes – Cargo Control and Release • e-Manifest: Rail and Sea Manifest (M1)	PRR	11/03/08	07/10/08
	ORR	04/06/09	10/30/08
	FOC	03/11/10	12/24/09
e-Manifest: Air Manifest and Cargo Release (M2)	PRR	11/03/08	03/05/09
	ORR	04/06/09	06/25/09
	FOC	03/11/10	08/19/10
e-Manifest: Exports and Mail Entry Writing System (M3)	PRR	11/03/08	04/08/10
	ORR	04/06/09	07/01/10
	FOC	03/11/10	07/29/10
 Exports and Cargo Control ESAR: Drawback, Protest, & Importer Activity Summary Statement (A3) 	PRR ORR FOC	02/15/10 07/16/10 07/22/11	04/08/10 07/01/10 07/29/10
e-Manifest: Custodial Entities, Pipelines, and Batch Processes (M4)	PRR ORR FOC	02/15/10 07/16/10 07/22/11	05/05/11 07/28/11 08/25/11
Screening and Targeting			
Advanced Targeting	PRR	11/29/06	07/19/07
	ORR	02/28/07	08/23/07
	FOC*	02/28/07	09/20/07

^{*} Full Operational Capability (FOC) reflects the date by which releases will be fully deployed.

Appendix F. Acronyms and Selected Definitions

ACE Automated Commercial Environment. The first major project of U.S.

Customs and Border Protection Modernization. Through enhanced

business processes and the new technology in ACE that will support them, border security and trade facilitation will be greatly

enhanced.

ARM Active Risk Manager

ARTS Audits and Reviews Tracking System

ATS Automated Targeting System

CBP U.S. Customs and Border Protection

CBSA Canada Border Services Agency

CCD Consolidated Consular Database

CDR Critical Design Review

CIO Chief Information Officer

CR Change Request

CRMB Cargo Requirements Management Board

CSPO Cargo Systems Program Office: The program office responsible for

ACE cargo management capabilities and other cargo processing

systems

C-TPAT Customs-Trade Partnership Against Terrorism

D & B Dunn and Bradstreet

DHS Department of Homeland Security

EA Enterprise Architecture

e-Manifest Electronic Manifest

ENFORCE Enforcement Case Tracking

ESAR Entry Summary, Accounts, and Revenue

EVM Earned Value Management

FAST Free and Secure Trade\

FMCSA Federal Motor Carrier Safety Administration

FOC Full Operational Capability

FTZ Foreign Trade Zone

FY Fiscal Year

GAO Government Accountability Office

GIF Great Idea Form

IASS Importer Activity Summary Statement

IBR Integrated Baseline Review

IDENT Automated Biometric Identification System

IEEE Institute of Electrical and Electronic Engineers

IMP Implementation Management Plan

IT Information Technology

ITDS International Trade Data System

IV&V Independent Verification and Validation

MEWS Mail Entry Writing System

Mod Act 1993 Customs Modernization Act

OIT Office of Information and Technology

ORR Operational Readiness Review

NTC National Targeting Center

PGA Participating Government Agency

PDCR Product Definition Completion Review

PDR Preliminary Design Review

PIA Privacy Impact Assessment

PRR Production Readiness Review

PRM Performance Reference Model

PTR Problem Tracking Report

RM Requirements Management

S&T Screening and Targeting

SAFE Port Act Security and Accountability for Every Port Act of 2006

SLC System Life Cycle

SEI Software Engineering Institute

SHCMP Strategic Human Capital Management Plan

SIGMA Secured Integrated Government Mainframe Access

SOA Service Oriented Architecture

TASPO Targeting and Analysis Systems Program Office: The program

office responsible for Screening and Targeting systems, including

ATS and ACE Screening and Targeting development efforts.

TF Targeting Framework

TSN Trade Support Network

TO Task Order

TRR Test Readiness Review